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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/014,265
Filing Date: November 07, 2001
Appellant(s): BRUCK ET AL.

Alfred K. Dassler
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed March 28, 2006 appealing from the Office action mailed October 19, 2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,802,845	ABE et al.	09-1998
5,455,012	MACHIDA et al.	10-1995

6,080,345	CHALASANI et al.	06-2000
6,689,328	OTANI et al.	02-2004
WO 98/51410	OTANI et al.	11-1998

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1, 2, 13-21, and 32-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abe et al. (5,802,845) in view of Machida et al. (5,455,012) and Chalasani et al. (6,080,345).

With respect to claims 1, 17-19, 32-34, 37, Abe et al discloses a combustion engine assembly comprising: a combustion engine having a displacement and emitting exhaust gases; a catalytic converter disposed downstream of the combustion engine for cleaning exhaust gas; said catalytic converter having at least one honeycomb body with a total volume smaller than the displacement by at least a factor of 0.6; and said catalytic converter having a geometric surface dimensioned to provide said catalytic converter with an effectiveness for converting at least one harmful component in the exhaust gasses into harmless components.

The apparatus of Abe et al is substantially the same as that of the instant claims, but is silent as to the percentage of effectiveness in converting the harmful component thereof.

In any event, Machida et al discloses provision of a catalytic converter having honeycomb bodies having a geometric surface dimensioned to provide said catalytic converter with a high effectiveness for converting at least one harmful component in the

exhaust gases into harmless components. The effectiveness apparently increases when the partition wall thickness decreases and the number of channels increases (Figs. 10-11, etc.). The partition wall thickness is at most 0.15 mm (150 micrometers) and the cell density is at least 65 cells/cm2 (400 cpsi).

Chalasani et al discloses the conventionality of providing a catalytic converter having at least one honeycomb body having the cell density of 600-1500 cpsi and the cell thickness of 1-2 mils (24-50 micrometers).

It would have been obvious to one having ordinary skill in the art to select an appropriate honeycomb body as taught by Machida et al and Chalasani et al in the apparatus of Abe et al so as to provide a high effectiveness for converting at least one harmful component in the exhaust gases into harmless components, as such is conventional in the art and no cause for patentability I here. Note that it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

However, since the combination of Abe et al., Machida et al. and Chalasani et al. discloses the catalytic honeycomb body with the same total volume relative to the displacement, the same cell density, and thickness as that of the instant claim, said honeycomb body of modified Abe et al inherently possesses the same conversion effectiveness as that of the instant claim.

With respect to claims 2, 13-16, 20-21, 35-36, 38-39, Machida et al. and Chalasani et al. discloses that the at least honeycomb body has a cross-section and a

number of channels is at least 600 cells per square inch over said cross-section and the thickness of the partition walls is at most 150 μm (Machida et al) or 24-50 μm (Chalasani et al), which encompass the range thickness and number of channels recited in the instant claims. Note that it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Claims 3-12, 22-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abe et al (5,802,845) in view of Machida et al (5,455,012), Chalasani et al (6,080,345) as applied to claims 1-2, 13-21, 32-39 above and further in view of Otani et al (WO 98/51410 - corresponding to US 6,689,328).

The modified apparatus of Abe et al is substantially the same as that of the instant claims, but is silent as to whether the honeycomb body may be a metallic honeycomb body having at least one of layered and wound sheet metal layers being at least partly structure.

However, Otani et al discloses the conventionality of providing a metallic honeycomb body having at least one of layered and wound sheet metal layers being at least partly structure. Otani et al further discloses that the channels are separated by channel walls having an average thickness of less than 40 μm which encompasses the thickness of the instant claims.

It would have been obvious to one having ordinary skill in the art to select an appropriate material for the honeycomb body, such as metal sheet layers as taught by

Otani et al in the modified apparatus of Abe et al, on the basis of its suitability for the intended use as a matter of obvious design choice and since such a modification would have involved a mere substitution of known equivalent structures. A substitution of known equivalent structures is generally recognized as being within the level of ordinary skill in the art. *In re Four* 213 USPQ 532 (CCPA 1982); *In re Susi* 169 USPQ 423 (CCPA 1971); *In re Siebentritt* 152 USPQ 618 (CCPA 1967); *In re Ruff* 118 USPQ 343 (CCPA 1958).

Note that it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

(10) Response to Argument

Rejections Under 35 USC 112, Second Paragraph

In view of appellant's remarks and specification, this examiner hereby withdraws the rejection of claims 1-39 under 35 USC 112, second paragraph.

Rejections Under 35 USC 103(a)

Appellant argues that none of the references, individually, disclose having an effectiveness of more than 98%.

In response to appellant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In this instance, while none of the references on their own disclose having an effectiveness of more than 98%, it is the examiner's position that the combination of Abe et al., Machida et al. and Chalasani et al. result in a device with all of the same structural properties as those recited in the instant claims; therefore such a device would inherently possess the same effective properties as the claimed device.

Appellant has not provided any further arguments with regard to the Otani et al. reference.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Alexa D. Neckel ADN 9/25/06

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PRIMARY EXAMINER

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